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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,441	04/02/2004	Osamu Miyazawa	9319A-000753	1655
27572	7590	05/30/2006	EXAMINER	
HARNES, DICKEY & PIERCE, P.L.C.			ADDISON, KAREN B	
P.O. BOX 828			ART UNIT	
BLOOMFIELD HILLS, MI 48303			PAPER NUMBER	
			2834	

DATE MAILED: 05/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/817,441

Applicant(s)

MIYAZAWA, OSAMU

Examiner

Karen B. Addison

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 2/6/06.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-18 and 20 is/are allowed.
- 6) ☒ Claim(s) 1-3, 7, 8, 10-13 and 19 is/are rejected.
- 7) ☒ Claim(s) 4-6 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1-3, 7, 8, 10-13 and 19 rejected under 35 U.S.C. 103(a) as being unpatentable over Zumeris (421) in view of Vishnevsky and combined with Miyazawa (WO 38309-cited by applicant).

Zumeris, figures 8 and 9 teaches an operating apparatus comprising an element #114 frame #115 he contacted element which is stationary with respect to the frame #102 the vibrating element #109, 111 the vibrating element being fixedly mounted on the element in a state where the contact portion abuts the contacted element, the vibrating element receives rotation force from the contacted element when the vibrating element vibrates so that the element is rotated together with the vibrating element by means of the reaction force. This structure is described as a bearing in which an inner race moves relative to an outer race thus the designation of driven element and drive element is not distinct. That is, it is not explicitly clear whether the inner race or outer race could be considered the Rotor and which could be considered to be the stator. Vishnevsky, compare for example figure. 1 in which the piezoelectric vibrating element is part of the rotor

with for example figure 17 which teaches the piezoelectric vibrator as part of the stator. Thus, regardless of Zumeris ambiguity would have been obvious to one of ordinary skill in the art from the explicit teaching of Vishnevsky that #102 could be fixed state or while #104 could rotate. Zumeris, figures 2 and 18 does not explicitly use laminated vibrating element comprising a reinforcing plate with a contact portion sandwiched between two piezoelectric elements. However, this specific construction is a well-known improvement to the basic Zumeris vibrator note specifically figures 6, 8, 9, 21 and 29 of Miyazawa. The laminated construction allows a higher power input and a larger mechanical output as well as better wear protection and a mechanically stronger vibrator. Thus, for at least these reasons it would have been obvious to one of ordinary skill in the art to utilize the vibrator construction of Miyazawa in the device of Zumeris.

Allowable Subject Matter

The following is a statement of reasons for the indication of allowable subject matter: Prior art fails to show, a drive element having a side surface and the frame has an inner wall surface which is opposite to the side surface of the driven element through a gap therebetween, and the contacted element and the vibrating element are arranged within the gap. Prior art also fails to show, the drive element having a bottom portion, and the vibrating element is provided on the bottom portion of the driven element. Prior art also fails to show the contact element is a protruding portion on the inner surface of the frame wall.

Claims 14-18 and 20 are allowed.

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Prior art fails to show a decelerating mechanism provide between the contacted element and the frame; wherein the vibrating element transmits power to the driven element via the contacted element and the decelerating mechanism to rotate the driven element together with the vibrating element.

Further cited of interest are Slutskiy, Zumeris(759), Gaynor, Honda and Zumeris(140).

Response to Arguments

Applicant's arguments filed 2/6/06 have been fully considered but they are not persuasive.

In response, the applicant argument that Zumeris fails to disclose the bearing and the piezoelectric motors being rotated together is noted. However, fig.8 and fig.9 clearly show an operating apparatus comprising an element(114), a frame (115), a contact element which is stationary with respect to the frame(102),a vibrating element(109 and 111) fixedly mounted on the element in a state where the contact portion abuts the contacted element, the vibrating element receives the rotation force from the contact element when, the vibrate element receives rotation force from the contacted element when the vibrating element vibrates so, that the element is rotated together with the vibrating element by means of reaction force.

In response to the applicant argument Vishnevsky and Miyazawa fails to cure the deficiency of Zumeris is noted. However, as state in the above office action that Vishnevsky #102 could be fixed (stator) while #104 could rotate and Miyazawa discloses the use of a laminated vibrating element in a operating apparatus wherein, the

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laminated construction allows a higher power input and larger mechanical output as well as better wear protection and a mechanically stronger vibrator.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen B. Addison whose telephone number is 571-272-2017. The examiner can normally be reached on 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KBA
5/15/06


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